

**Virginia Invasive Species Working Group
June 4, 2008 - 1:00 p.m. – 3:00 p.m.
Patrick Henry Building
East Reading Room**

Virginia Invasive Species Working Group Members Present

The Honorable L. Preston Bryant, Jr., Chair
Glenn Bishop, Dominion Power for Bill Bolin
Gwynn Crichton, The Nature Conservancy
Joseph McCauley, U.S. Fish and Wildlife Service
Shepard M. Zedaker, Ph.D., Virginia Polytechnic Institute & State University
Todd P. Haymore, Virginia Department of Agriculture and Consumer Services
Carl E. Garrison, III, Virginia Department of Forestry
Joseph H. Maroon, Department of Conservation and Recreation
Steven G. Bowman, Marine Resources Commission
Karen Remley, Department of Health
Morris Walton, Department of Transportation
Robert W. Duncan, Department of Game and Inland Fisheries
Roger Mann, Virginia Institute of Marine Science

DCR Staff Present

Tom Smith
Rick Myers
Kevin Heffernan
Theresa Layman
Michael Fletcher

Others Present

Chris Asaro , Virginia Department of Forestry
Ray Fernald, Department of Game and Inland Fisheries
Frank Fulgham, Virginia Department of Agriculture and Consumer Services
David Phemister, The Nature Conservancy
Robert O'Reilly, Marine Resources Commission
Justin Curtis, J.D. Candidate, 2008, University Of Richmond School Of Law
Nikki Rovner, Deputy Secretary of Natural Resources
Sarah Stamp, Middle Peninsula Planning District Commission
Bill Tanger, Friends of the Rivers of Virginia

Call to Order

Secretary Bryant called the meeting to order and thanked members for attending. He said that Governor Kaine remains very active with the issues of invasive species. He noted that his office submits a weekly report to the Governor and that each time the Invasive Species Working Group meets the Governor will follow up with additional questions and concerns.

Secretary Bryant noted that the last meeting of the Working Group was on May 13, 2007. he said that the intent is to increase the frequency of meetings. Currently September dates are being considered for the next meeting.

Secretary Bryant said that staff has proceeded to work on the development of the invasive species list. He said that the working group needed to address the imminent threat of the Emerald Ash Borer. This has prompted a call for action regarding the transport of firewood. Firewood also serves as a transport vector for a number of exotic invasive pests like the Asian Longhorned Beetle, Emerald Ash Borer, Sirex Wood Wasp and Bark Beetles. He said that perhaps this was the first call to action before the Working Group.

Secretary Bryant said that he would like for the Working Group to be ready to consider a course of action on the firewood issue at the next meeting.

Virginia Invasive Species List

Secretary Bryant called on Dr. Rick Myers to present an overview of the Virginia Invasive Species List. He said that, as requested by the Working Group, the Advisory committee has developed a dirty dozen list to help bring attention to the invasive species issue and how these species impact citizens directly as well as the environment. The list includes six species that are here now and important to deal with now, and six species not yet in Virginia and important to keep out.

Secretary Bryant said that the list was designed to cover plants and animals. A longer list has also been developed and includes disease vectors such as Asian tiger mosquito. In addition, agencies such as DCR would continue to maintain a more comprehensive invasive plant list, with which these efforts will be coordinated.

Dr. Myers presented the following list of Twelve Highly Invasive Species.

	Scientific name	Common name	Lifeform	T/A	P/A
Control and Manage	<i>rapana venosa</i>	rapa whelk	gastropod	aquatic	present
	<i>Phragmites australis</i>	common reed	plant	aquatic	present
	<i>Channa argus</i>	northern snakehead fish	fish	aquatic	present
	<i>Ailanthus altissima</i>	tree-of-heaven	plant	terrestrial	present
	<i>Microstegium vimineum</i>	Japanese stilt-grass	plant	terrestrial	present
	<i>Solenopsis invicta</i>	red imported fire ant	insect	terrestrial	present
Keep out!	<i>Orconectes rusticus</i>	rusty crayfish	crustacean	aquatic	potential
	<i>Dreissena polymorpha</i>	zebra mussel	mollusk	aquatic	potential
	<i>Eriocheir sinensis</i>	Chinese mitten crab	crustacean	aquatic	potential
	<i>Agrilus planipennis</i>	emerald ash borer	insect	terrestrial	potential
	<i>Sirex noctillo</i>	sirex woodwasp	insect	terrestrial	potential
	<i>Phytophthora ramorum</i>	sudden oak death	water mold	terrestrial	potential

Dr. Myers said that the Advisory group was charged with the development of a list representative of the base of the invasive species issue. He said the list is a short list to be

used for education and outreach efforts for the general public and policymakers. He said that this list not the list of the most important species, yet all are important and cause or have the potential to cause significant harm.

Dr. Myers said these twelve species were selected by the Advisory Committee in meetings and discussions over the last few months. Species are equally distributed between: Present (6) and Potential (6) and Aquatic (6) and Terrestrial (6) species. He said that a diversity of lifeforms is represented from plants to gastropods, fish to fungi.

The list of 12 includes species that occur or that could become established in all parts of Virginia....no one is left out (examples: Phragmites throughout coastal areas; red fire ants across all of southern C.P and Piedmont; Tree-of-heaven and Japanese stilt-grass occur throughout entire state; sudden oak death and emerald ash borer have potential to occur across entire state.

As this diverse list includes many lifeforms and the species will in some way affect most if not all Virginians in some way, this list of 12 can be presented as the face of the Invasive Species Issue in the Commonwealth.

Dr. Myers again noted that the purpose of this list of 12 Highly Invasive Species is for education of the public and policymakers about the invasive species issue.

Dr. Myers recommended that an outreach effort have at least three parts:

- Poster of the 12 species
- Printed color brochure that goes into greater depth about the 12 species
- Website presentation of the same information on the 12 Highly Invasive Species

He said that the Advisory Committee recommended that the focus of such education should first and foremost be to make clear why people should care about this issue. That is, answer the following questions:

- “How do these species affect you and your life?”
- “In what way can one or more of these species cause you to be worse off than if it wasn’t present?”
- “What can be done to prevent serious invasions by these and other species?”

Secretary Bryant called for a motion to adopt the list of twelve species. It was moved and seconded and the motion was carried unanimously.

Invasive Species Mapping Tool

Mr. Smith presented an overview of the Invasive Species Mapping Too.
(www.iMapInvasives.org).

Mr. Smith said that Florida, New York, The Nature Conservancy and NatureServe have developed an on-line invasive species mapping tool, with an investment of over \$120,000 to date. VA and other states have been invited to join in as members at an initial cost of \$2,000 setup and \$5,000 annual fee. Data is maintained on a Florida State University Server. Info on this tool proposed for adoption here in VA will be presented. The Advisory Committee and Mid-Atlantic Aquatic Invasive Species Panel endorse the effort.

Mr. Smith said this is a web-based approach to mapping invasive species data. A group in Florida had developed a prototype. Some of the key partners with Florida are:

- Florida Natural Areas Inventory
- Florida State University
- NY Natural Heritage Program
- The Nature Conservancy Invasive Species Team
- NatureServe
- Oregon, New Mexico and Pennsylvania are coming online

Mr. Smith said the site is set up to inform users as new species are moving toward and into a defined region; or into or toward a prevention zone such as a park or nature preserve. The system is set up to deal with all taxa, plants and animals.

This geographic information system combines both map location data and information on the species of concern. It's an online tool open to the public to look at the distributions and submit data to the site steward. Approved users could enter and update data online.

The system will import data from systems already in place:

- US Department of Agricultural – Cooperative Agricultural Pest Survey
- WEEDAR (Florida)
- TNC's Weed Information Management System
- and others

Secretary Bryant asked about funding for the system.

Mr. Smith said that DCR has some funding available from the National Aquatic Species Grant. The system resides on servers at Florida State University.

Mr. Smith said that for this to be effective there needs to be more work done on Virginia's early detection system. A number of those types of questions will be part of the building process.

Secretary Bryant asked for the endorsement of the Working Group. The motion carried and the working groups adoption of the iMapInvasives system was unanimously endorsed.

Education and Outreach

Secretary Bryant called on Mr. Bill Tanger to present an overview of a poster developed to highlight the 12 invasive species threats to Virginia.

Mr. Tanger gave an overview of the “Dirty Dozen” poster and presented it in several formats for the Working Group to review. He said this was the first draft of an education piece. The poster outlined 12 invasive species and provided the information with the common name, the economic impact, the potential economic impact and action that might be taken.

Dr. Zedaker said that it is the Extension Service’s job to take this type of information to the public, and they should be a part of the outreach effort.

Ms. Crichton said that The Nature Conservancy was also working on a brochure that should be available in the fall. She said it is key identify the audience. She said that the intent of TNC’s brochure would be to reach an audience of policymakers. She also suggested the Working Group consider a strategy that includes the poster, a brochure, website, and that this be worked on by the Advisory Committee and brought back to the Working Group at the next meeting.

Secretary Bryant note that a comprehensive public outreach agenda could play some role in the Governor’s 2009 Year of the Environment, and called for Working Group consensus regarding Outreach and Education. It was moved and seconded that the Working Group move ahead with the development of an outreach and education agenda. The motion carried unanimously.

Firewood as a Pathway for Forest Pests

Dr. Chris Asaro of the Virginia Department of Forestry gave the following presentation:

Firewood as a Pathway for Forest Pests

The annual economic benefit of Virginia’s forests is over \$29 billion.

Threats to Forest Health

- Urban growth and development
- Ownership patterns
- Forest Fragmentation
- Drought, fire, wind, flooding
- Climate Change?
- Native insects and diseases
- Invasive insects and diseases
- Non-native invasive plants

Invasive Pests of the Past and Present

- Chestnut Blight – Virtually eliminated most common hardwood in eastern forests in a few decades
- Dutch Elm Disease – Wiped out American elm from most eastern forests and major cities

- Hemlock Woolly adelgid – in the process of eliminating eastern hemlock from Virginia since the 1950s
- Gypsy Moth – Periodically causes defoliation on hundreds of thousands of acres of Virginia's oak-hickory forests

Invasive Pests on the horizon

- Emerald Ash Borer – If established all native ash species will be virtually eliminated
- Asian Longhorned Beetle – If established, most maple will be virtually eliminated
- European Woodwasp – If established, impacts unknown, potential threat to loblolly pine
- Sudden Oak Death – If established, impacts unknown, could be catastrophic
- Beech Bark Disease – Say goodbye to American beech?

Emerald Ash Borer Impacts

- Michigan Costs: >30 million trees killed since 2002. Losses could exceed \$10 billion
- Ohio Costs: >50,000 trees killed > \$3 billion over next 10 yrs
- Maryland: \$6 million since 2004
- Potential Virginia Costs: Perhaps \$1 billion, mostly due to urban tree removal and replacement costs, chemical control efforts
- Nationally, could cost hundreds of billions of dollars

Asian Longwood Beetle: Impacts

- Cost of Chicago, NY, NJ eradication efforts: \$300 million during last 10 yrs
- Potential cost to US urban forests if ALB established across the US.
 - Loss of 34.9% of total canopy cover
 - Loss of 30.3% of urban trees (1.2 billion)
 - \$669 billion (Nowak et al. 2001, USDA Forest Service)

Sudden Oak Death Impacts

- Eradication Costs in CA: \$100 million since 2003
- Eradication Costs in OR: \$2.5 million
- Potential Impact in VA: Unknown

Beech Bark Disease Impacts

- Difficult to determine since beech is a very minor timber species
- Ecosystem level affects will be devastating but difficult to place a dollar value on

How do they get here?

- Global trade via ports – infested wooden pallets, crates, dunnage, etc.
- Interstate trade and transport of forest and wood products
- Nursery trade
- Illegal importations of plant and animal material

- Interstate movement and sale of firewood
- Movement of firewood by private citizens

Don't Move Firewood

- Firewood movement identified as a major vector for many invasive insect pests
- Many new infestations associated with campgrounds
- Firewood for sale in Virginia comes from many different states and countries
- Firewood movement can cause rapid spread of emerald ash borer, Asian longhorned beetle, and gypsy moth among other things

What Virginia should do

1. Cut off firewood pathway by prohibiting or regulating firewood movement by campers onto state and federal lands
2. Enforce compliance agreements that require all out-of-state firewood being sold for sale in Virginia to be certified (heat treatment to core temp > 160° for > 75 minutes)
3. Initiate strong educational campaign through multiple state agencies to limit firewood movement and discourage planting of native ash species

TNS Survey: Users support the idea of limiting firewood transportation to state lands.

- 69% had heard something about not moving firewood
- 90% would be 'very or somewhat willing' to use only local firewood
- 66% would support (strongly or somewhat) paying slightly more for firewood if they knew it was pest free
- 81% would support (strongly or somewhat willing) regulating the transport of firewood into state parks or state lands

Firewood Survey: Key Findings

- A little bit of information should go a long way in motivating behavioral changes
- There is little resistance to policies that limit firewood movement
- There are high rewards for targeting the heavy users, and there should be distinct ways to reach them
- Messages focusing on recreation, public health, and neighborhood and cost impacts are likely to be effective
- Point-of-purchase and point-of-use information is likely to be helpful, and cost-effective
- Informal networks are likely to be critical in getting the word out

The Costs of Doing Nothing

- Invasive species list will continue to get longer while funds and personnel available to handle each new emerging crisis will continue to diminish

- We will continue to lose native tree species, which will gradually result in “junk forests” choked with invasive weeds and lacking in biodiversity and aesthetic appeal
- Virginia’s forests will continue to decline: economically, environmentally, aesthetically, and recreationally; Annual impacts for Virginia could eventually be measured in billions of dollars.
- What we do and don’t do affects other states as well, and has implications for the national economy.

Mr. Maroon noted that Virginia State Parks have taken action regarding the use of firewood within the park system.

Theresa Layman of the Division of State Parks reviewed a handout that is now included with all state parks reservations confirmations. She said that DCR has been working with the Department of Forestry to see what ways firewood can be managed.

Mr. Maroon said that at some point DCR might need additional regulatory or statutory authority to deal with this issue.

Mr. Garrison said that a lot of efforts have been put forth to deal with the issue. He said that the National Parks System would be implementing guidelines next year.

It was noted that not all camping is done in state parks and that the NASCAR community also should be targeted.

Secretary Bryant noted the need for a comprehensive plan for dealing with firewood in Virginia, and encouraged a draft course of action be brought to the next meeting of the Working Group.

Legal review of Virginia invasive species laws and regulations

Secretary Bryant said that the University of Richmond has completed an initial review with two case studies of VA’s invasive species laws and regulations primarily as they relate to plants. Secretary Bryant called on Justin Curtis, University of Richmond law student, to present findings of the initial review.

Mr. Curtis said that he was asked to review what authorities agencies had for dealing with invasive species. He said that generally speaking there is broad discretion. Mr. Curtis reviewed the following points from the conclusion of the study.

It is evident that Virginia’s agencies have the statutory tools at their disposal to confront a wide variety of invasive species threats. The General Assembly has enabled agencies to respond appropriately by conferring broadly worded authority on agencies to respond to invasive species infestations. As an example, the Virginia Pest Law aptly illustrates this observation with its provision authorizing VDACS to “carry out operations or measures to locate, to suppress, control, or eradicate, or to prevent or retard the spread of pests.” § 3.1-188.22. VDACS could

cite this statutory language to justify nearly any action to control invasive plant pests, provided that the action is not otherwise unlawful.

This conclusion is not without qualification. Virginia's statutory and regulatory framework could be improved. Recommendations are the following:

- The meaning of Virginia Administrative Process Act (VAPA) should be clarified. Particularly it should be resolved whether a Virginia citizen can sue a state agency to compel it to undertake prevention, control or eradication measures in response to an invasive species threat. This could be accomplished by a test case, or it could be clarified by statutory amendment.
- Given that infested firewood from quarantined areas of other states "poses a threat to the health of this Commonwealth," VDACS should exercise its mandatory authority under §3.1-188.24 to quarantine and prohibit firewood from any state where an EAB infestation presently exists.
- VDOF should be given the express statutory authority to quarantine regulated articles in all state forests within its jurisdiction. Such authority would permit VDOF to prohibit the introduction or removal of regulated articles from state forests. This authority may, however, presently exist in VDOF's general authority to promulgate regulations necessary for the protection of forests, §§ 10.1-1101, - 1103.
- VDACS should expand the list of "noxious weeds" to include giant salvinia, kudzu, water hyacinth, and other invasive plants that pose a threat to Virginia. §3.1-296.14. This would, presumably, facilitate prevention measures and reduce the time it would take to respond to the discovery of a plant infestation. It would also make it unlawful to import these plants into the state. §§ 3.1-296.16, 296.18.
- The Nonindigenous Nuisance Species Act, §§ 29.1-571 to -577, should be amended to give VDGIF express authority to undertake control and eradication measures against invasive plant species that pose a threat to Virginia's wildlife.
- An agency, either VDGIF or VDACS, should be given mandatory authority to confront invasive plant infestations in Virginia's waters.

Working Group Roundtable Discussion

Ms. Crichton noted that the Executive Order for the Invasive Species Working Group was set to expire on July 1, 2008. She asked if another directive was being pursued.

Secretary Bryant said that the Executive Order is being pursued, but noted that would not continue the work into the next Administration. He said that legislation to create a permanent body is being pursued.

Public Comment

Sarah Stamp asked if consideration was given to addressing these issues through land conservation acquisition including easement language recommendations to the VA Outdoors Foundation.

Secretary Bryant said that the Virginia Land Conservation Foundation is working to revise standards to include the consideration of invasive species.

Mr. Smith said that DCR has not taken specific easement language recommendations to the Virginia Outdoors Foundation staff. He said that there is a much greater need for invasive species technical expertise related to land conservation issues, than can currently be met with existing resources. DCR will follow up with Mr. McCauley as the USF&WS has developed specific language which they incorporate into their easements.

Adjourn

Secretary Bryant thanked members for attending, encouraged members to email agenda items for the next meeting to him, Joe Maroon and/or Tom Smith and adjourned the meeting.

Respectfully submitted,

The Honorable L. Preston Bryant, Jr.
Chair

Joseph H. Maroon
DCR Director

ACTION ITEMS

- Secretary Bryant said that he would like for the Working Group to be ready to consider a course of action on the firewood issue at the next meeting.
- Secretary Bryant called for a motion to adopt the list of twelve species. It was moved and seconded and the motion was carried unanimously.
- Secretary Bryant asked for the endorsement of the Working Group. The motion carried and the Working Groups adoption of the iMapInvasives system carried unanimously.
- Secretary Bryant note that a comprehensive public outreach agenda could play some role in the Governor's 2009 Year of the Environment, and called for Working Group consensus regarding Outreach and Education. It was moved and seconded that the Working Group move ahead with the development of an outreach and education agenda. The motion carried unanimously.
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